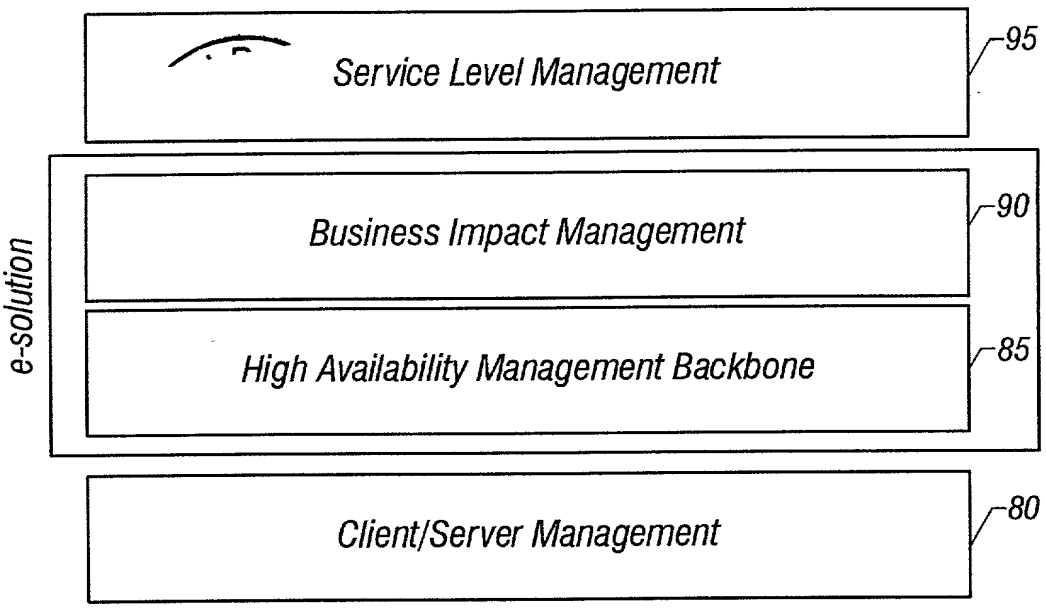

Service Level Management
95
e-solution
Business Impact Management
90
High Availability Management Backbone
85
Client/Server Management
80

FIG. 1

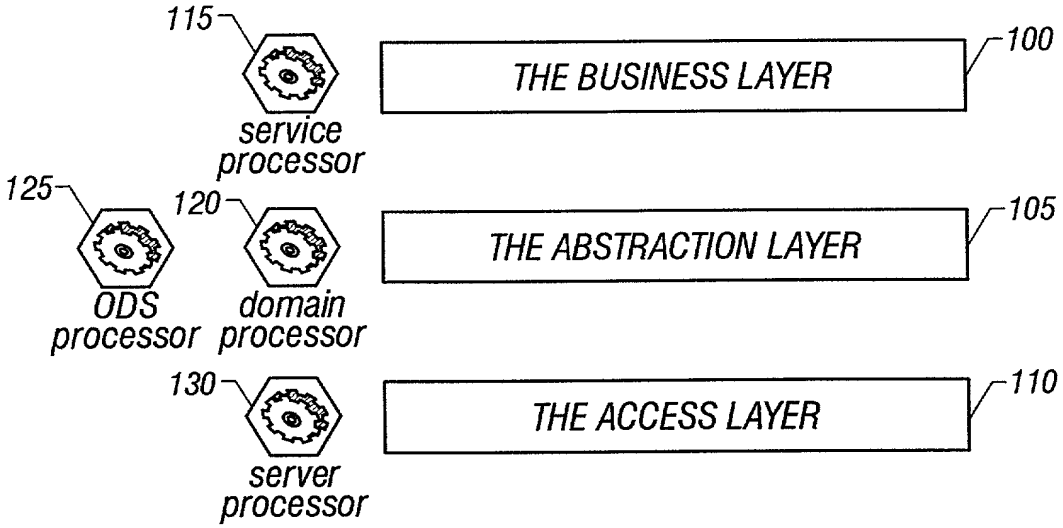

115
service processor
THE BUSINESS LAYER
100
125
120
ODS processor
domain processor
THE ABSTRACTION LAYER
105
130
server processor
THE ACCESS LAYER
110

FIG. 2

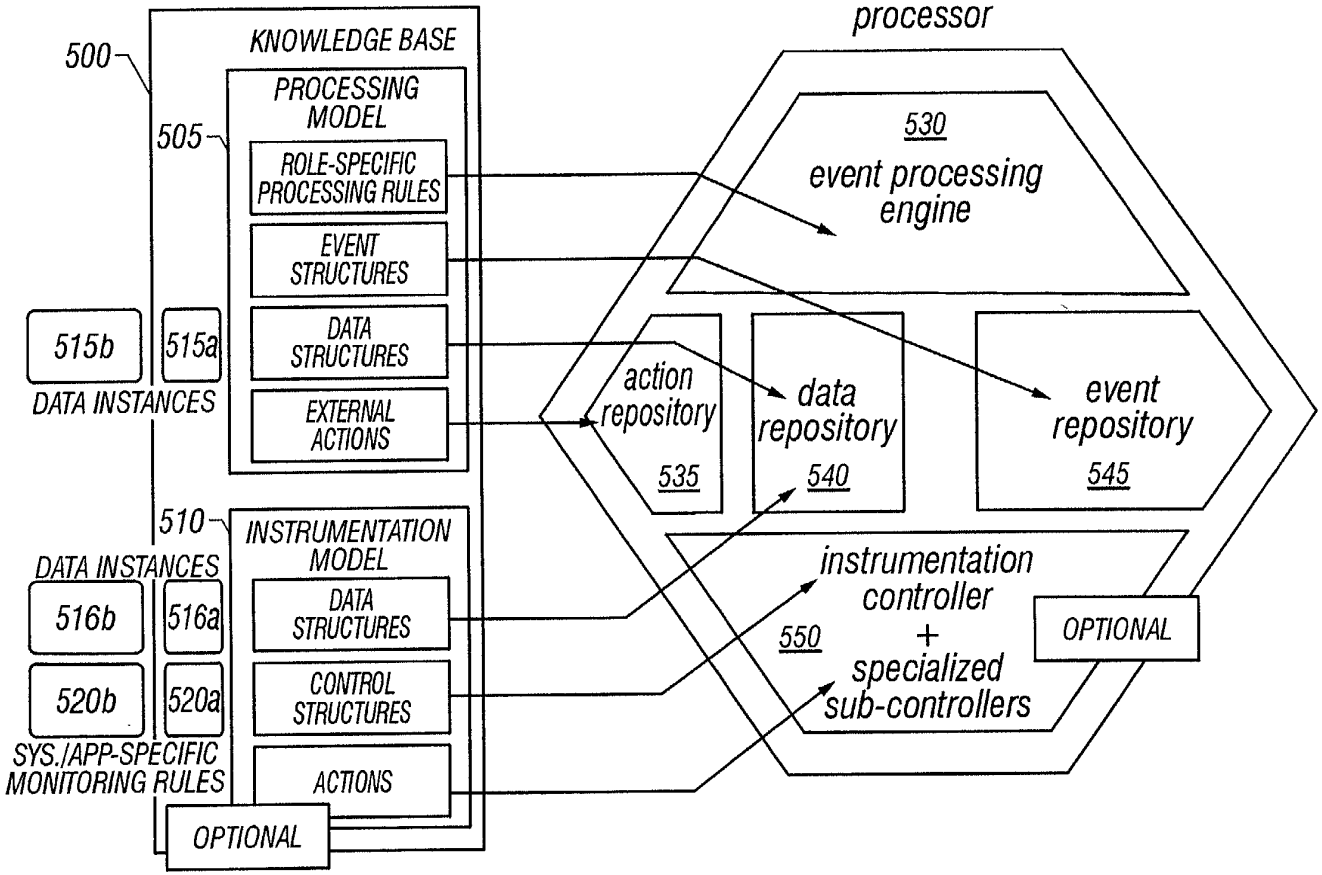

500
KNOWLEDGE BASE
505
PROCESSING MODEL
ROLE-SPECIFIC PROCESSING RULES
EVENT STRUCTURES
DATA STRUCTURES
EXTERNAL ACTIONS
515b
515a
DATA INSTANCES
510
INSTRUMENTATION MODEL
DATA INSTANCES
516b
516a
DATA STRUCTURES
520b
520a
CONTROL STRUCTURES
SYS./APP-SPECIFIC MONITORING RULES
ACTIONS
OPTIONAL
processor
530
event processing engine
action repository
535
data repository
540
event repository
545
instrumentation controller
550
+
specialized sub-controllers
OPTIONAL

FIG. 3

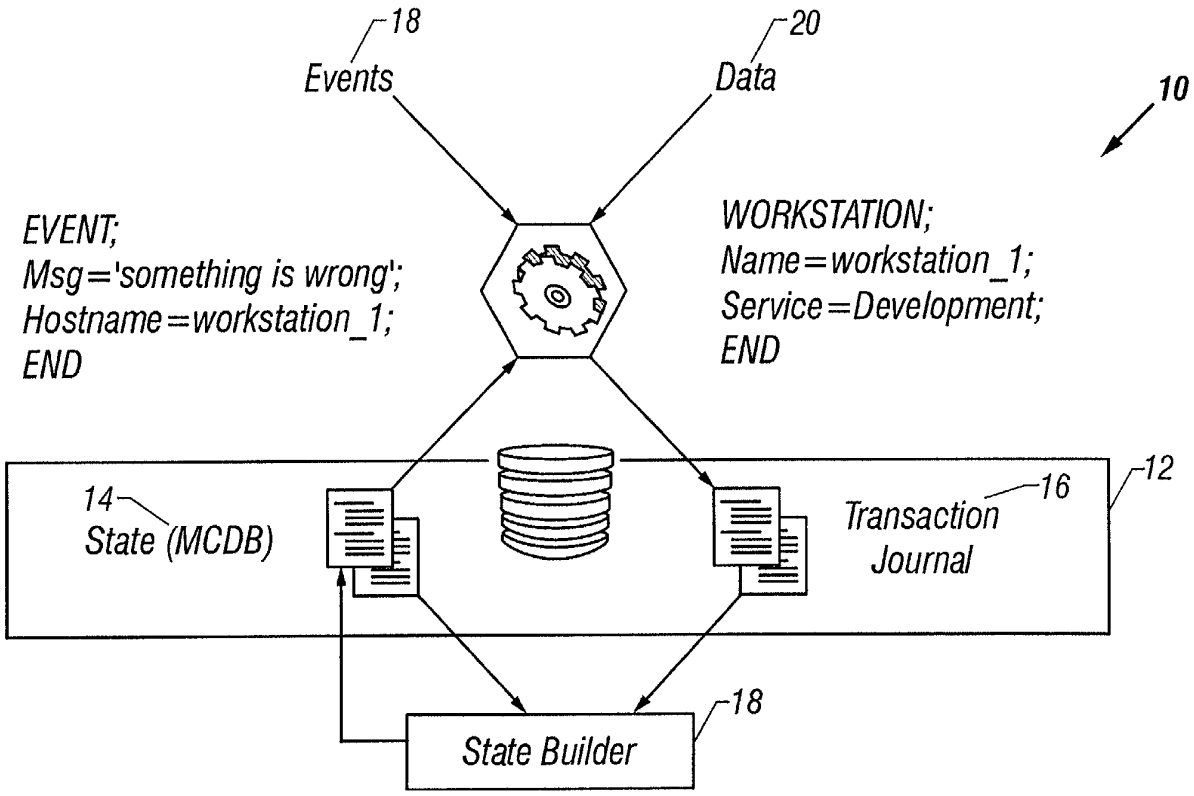

18
Events
20
Data
10
EVENT;
Msg='something is wrong';
Hostname=workstation_1;
END
WORKSTATION;
Name=workstation_1;
Service=Development;
END
14
State (MCDB)
16
Transaction
Journal
12
18
State Builder

FIG. 4

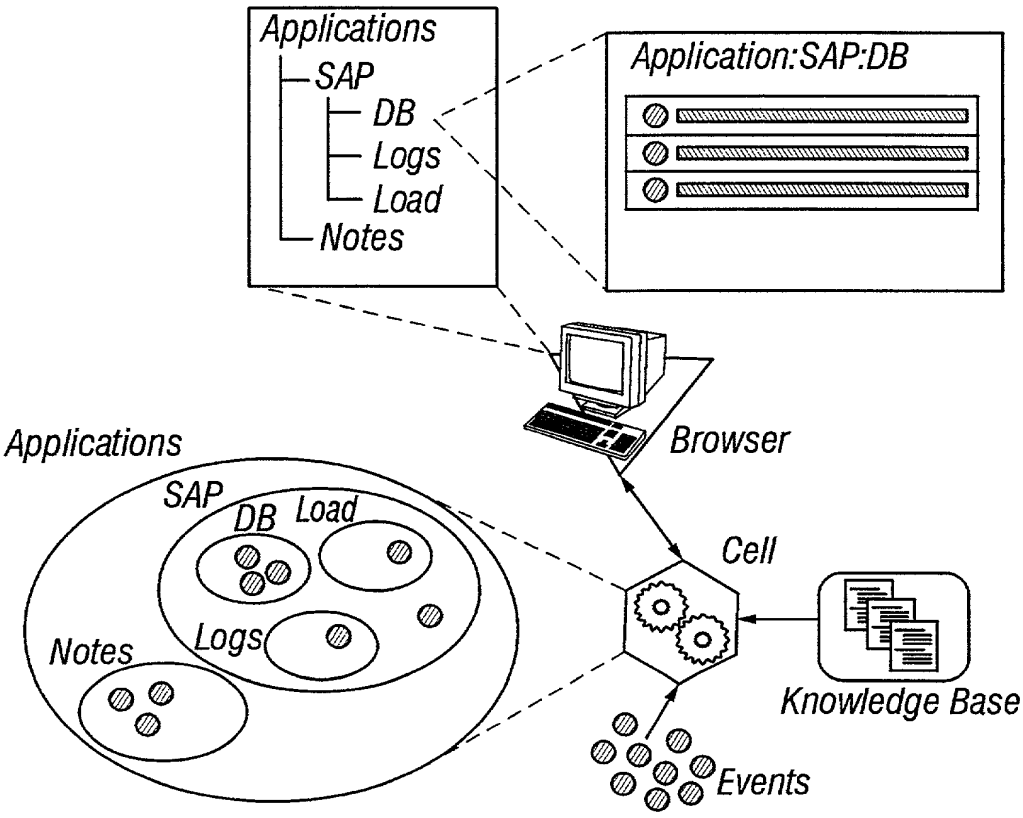

Applications
SAP
DB
Logs
Load
Notes
Application:SAP:DB
Browser
Applications
SAP
DB
Load
Logs
Notes
Cell
Knowledge Base
Events

FIG. 5

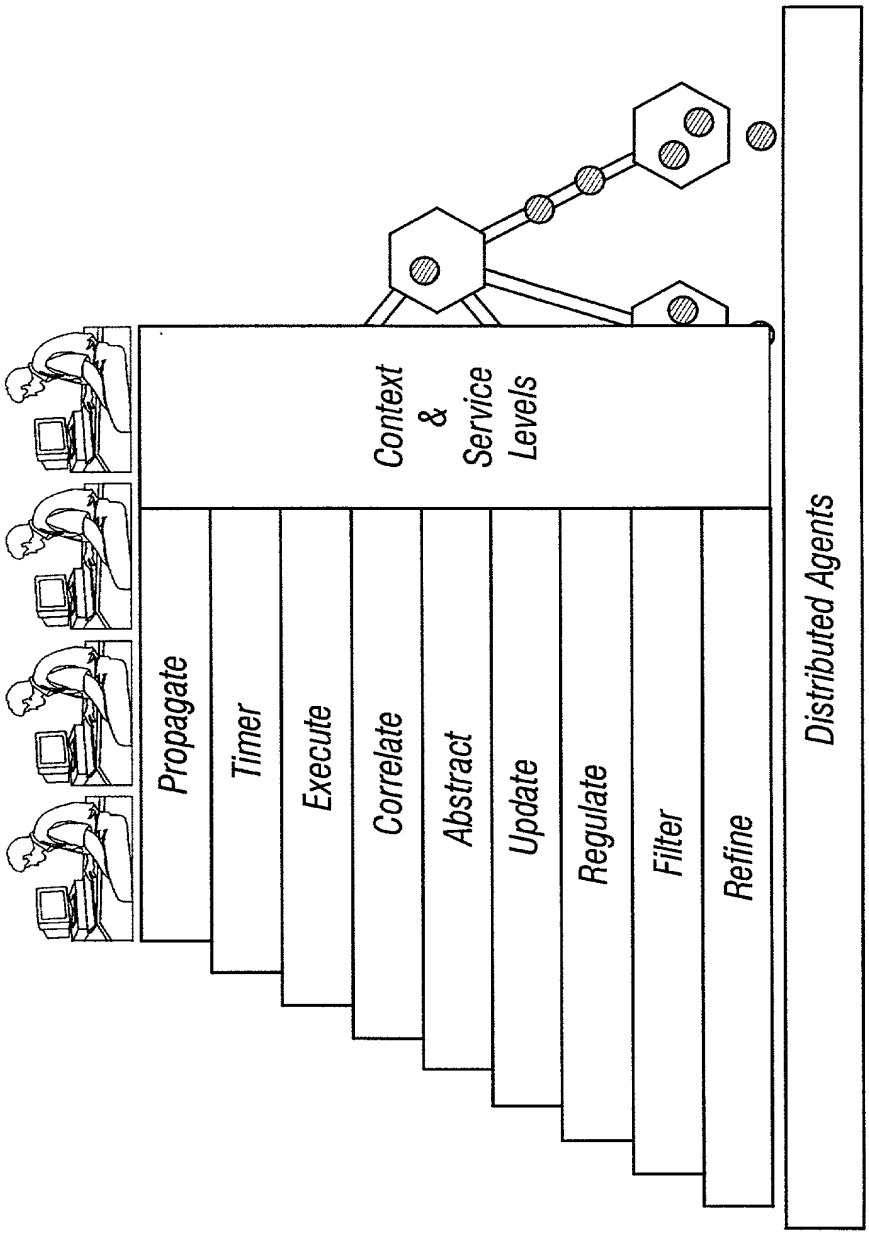

Propagate
Timer
Execute
Correlate
Abstract
Update
Regulate
Filter
Refine
Context & Service Levels
Distributed Agents

FIG. 6

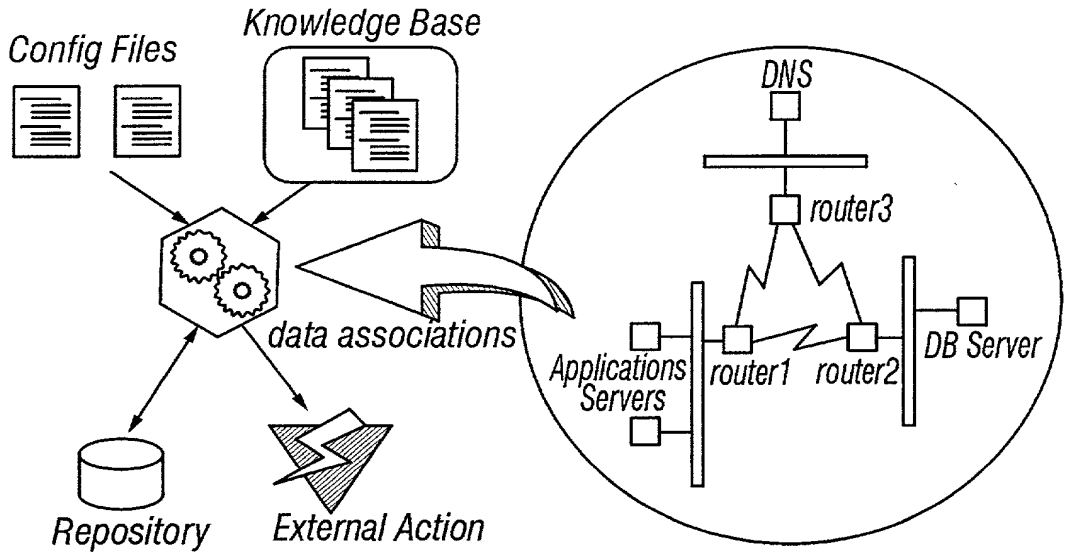

Config Files
Knowledge Base
DNS
router3
data associations
Applications Servers
router1
router2
DB Server
Repository
External Action

FIG. 7

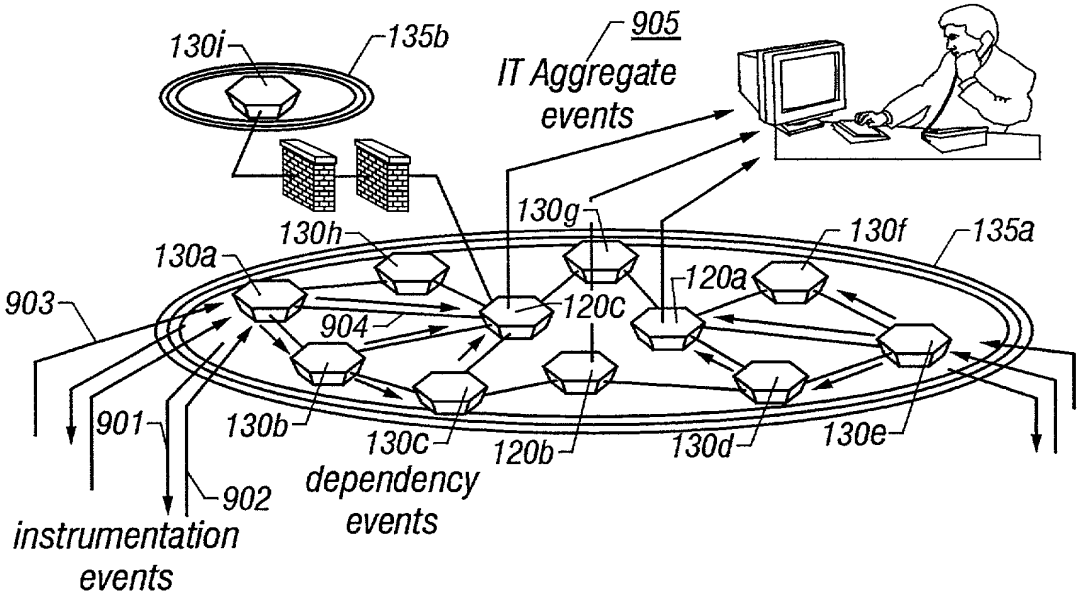

130i
135b
905
IT Aggregate events
130g
130h
130f
135a
130a
120a
903
120c
904
901
130b
130c
120b
130d
130e
902
dependency events
instrumentation events

FIG. 8

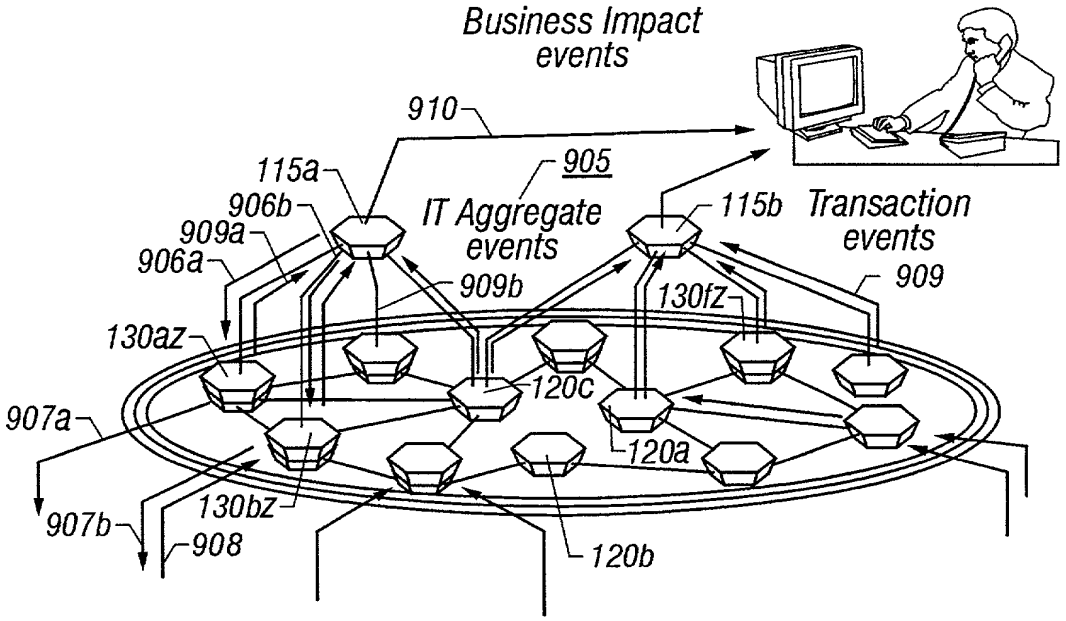

Business Impact events
910
905
115a
906b
909a
906a
IT Aggregate events
115b
Transaction events
909b
909
130fz
130az
120c
907a
120a
130bz
907b
908
120b

FIG. 9

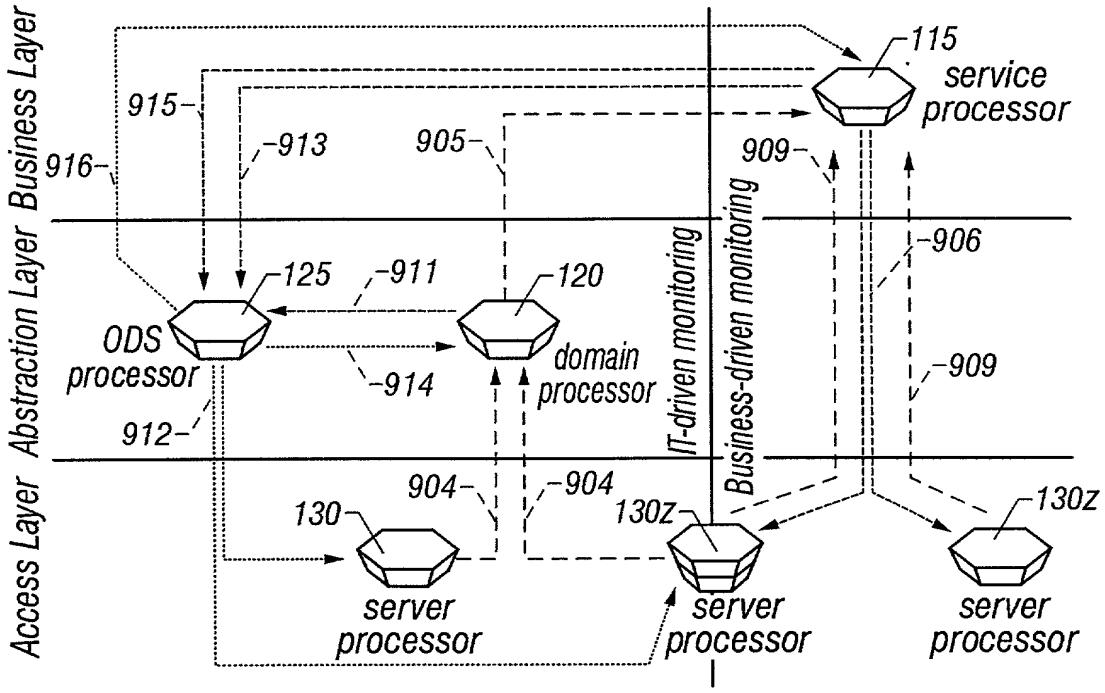

Business Layer
Abstraction Layer
Access Layer
115
service processor
915
913
905
909
916
906
125
911
120
ODS processor
domain processor
914
909
912
IT-driven monitoring
Business-driven monitoring
904
904
130
130z
server processor
server processor
server processor

FIG. 10

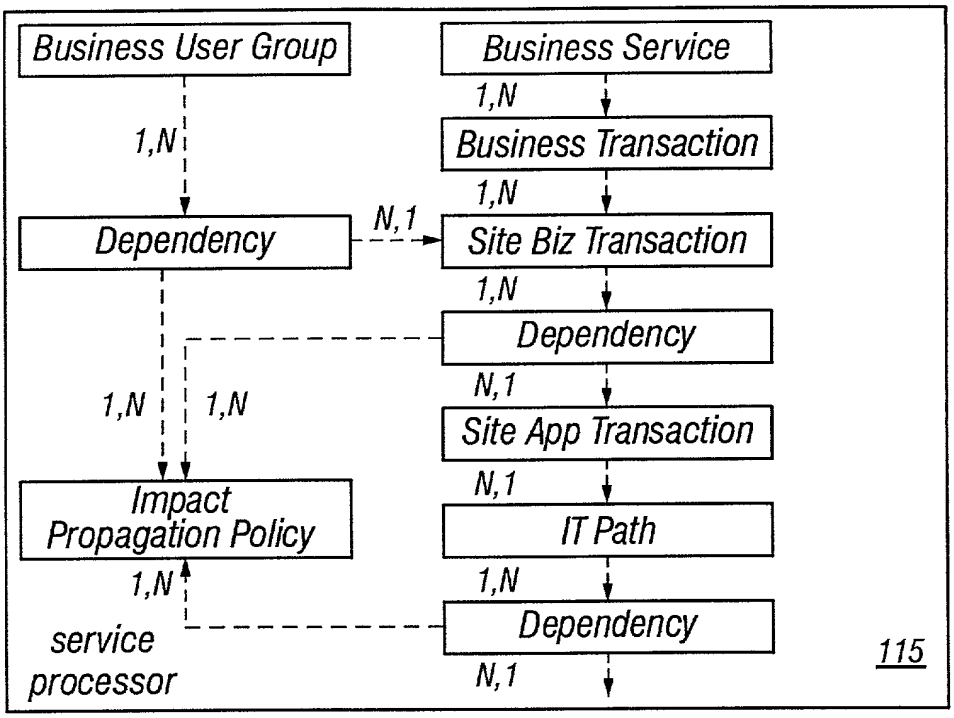

Business User Group
Business Service
1,N
1,N
Business Transaction
1,N
Dependency
N,1
Site Biz Transaction
1,N
Dependency
1,N
1,N
N,1
Site App Transaction
N,1
Impact Propagation Policy
IT Path
1,N
1,N
Dependency
service processor
N,1
115

FIG. 11

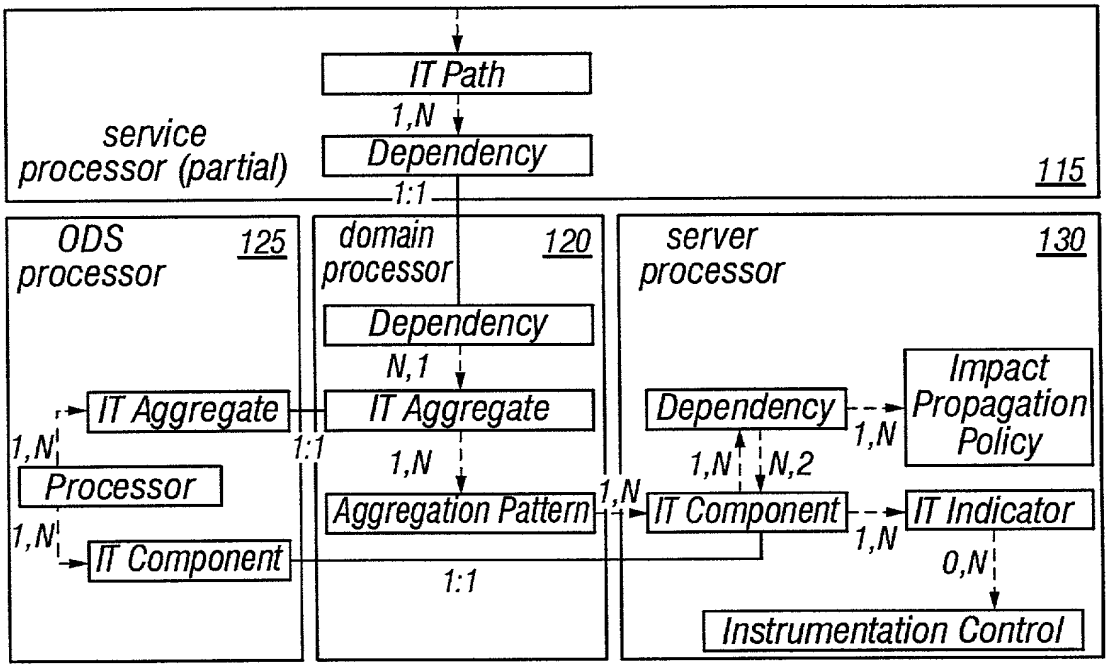

IT Path
1,N
service processor (partial)
Dependency
115
1:1
ODS processor
125
domain processor
120
server processor
130
Dependency
N,1
IT Aggregate
IT Aggregate
Dependency
Impact Propagation Policy
1,N
1:1
1,N
1,N
N,2
1,N
Processor
1,N
Aggregation Pattern
IT Component
IT Indicator
1,N
1,N
IT Component
0,N
1:1
Instrumentation Control

FIG. 12

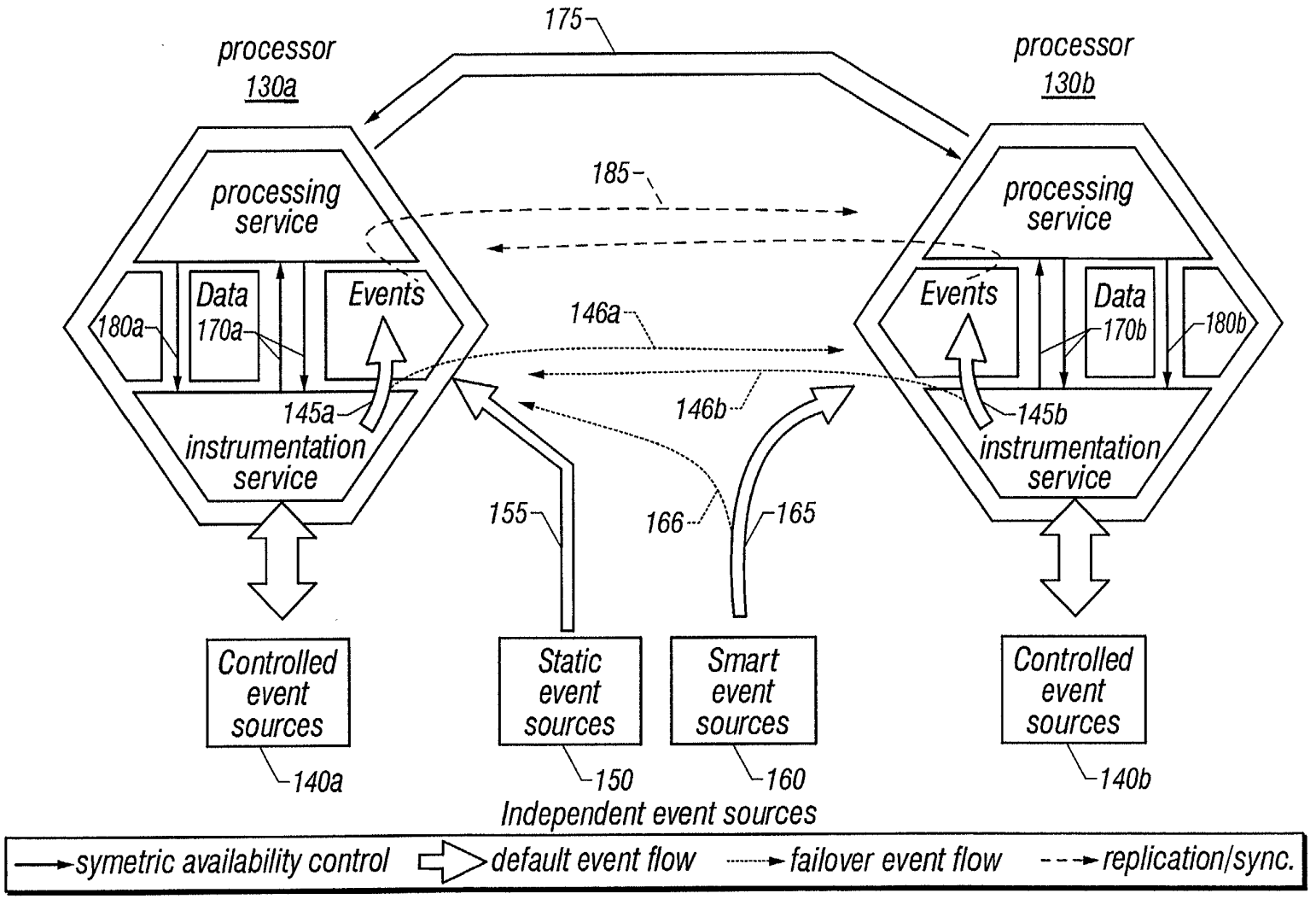

175
processor
130a
processor
130b
185
processing service
processing service
Data
170a
Events
180a
146a
Events
Data
170b
180b
145a
instrumentation service
146b
145b
instrumentation service
155
166
165
Controlled event sources
140a
Static event sources
150
Smart event sources
160
Controlled event sources
140b
Independent event sources
symetric availability control
default event flow
failover event flow
replication/sync.

FIG. 13

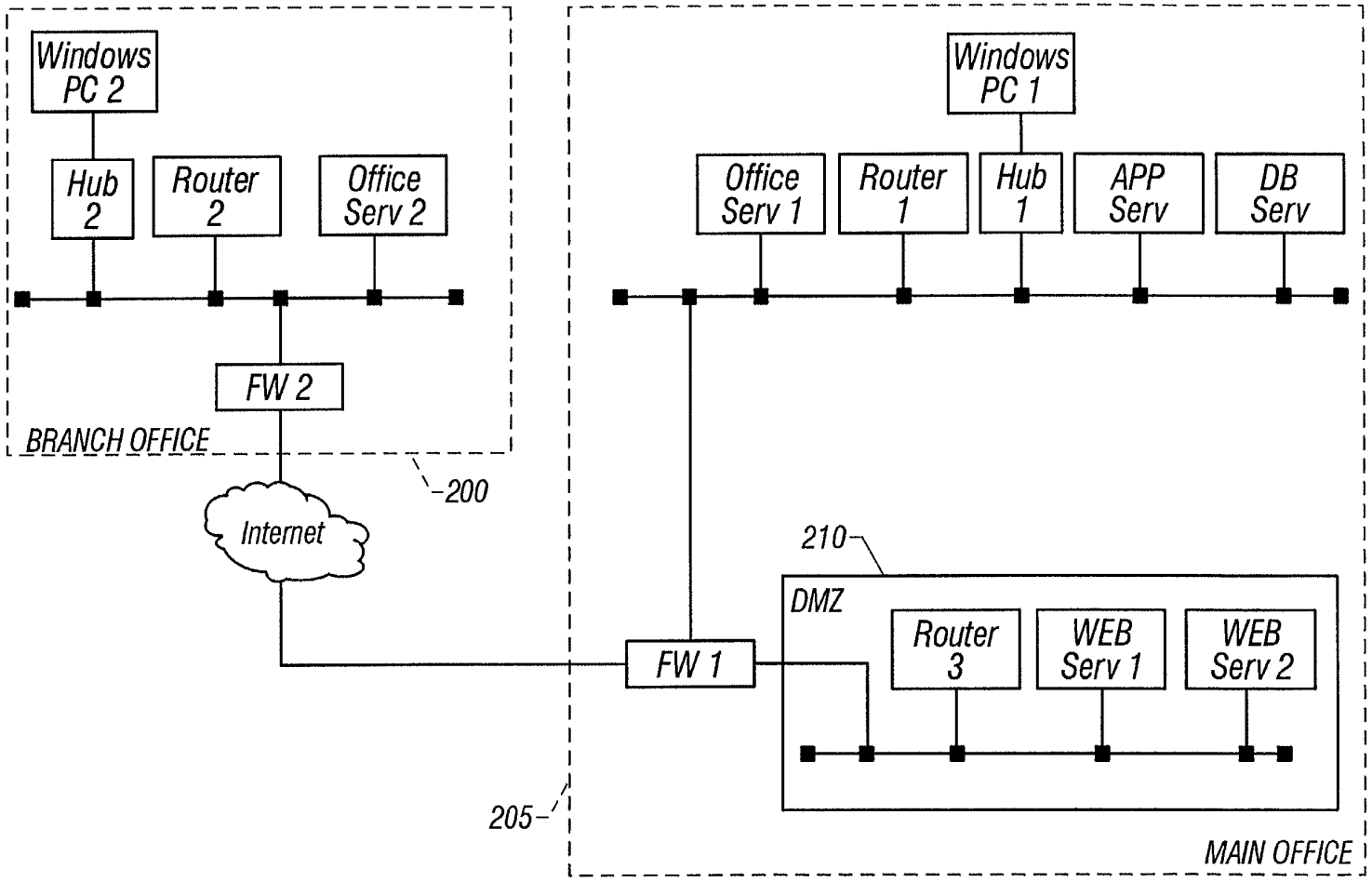

Windows PC 2
Hub 2
Router 2
Office Serv 2
FW 2
BRANCH OFFICE
200
Internet
Windows PC 1
Office Serv 1
Router 1
Hub 1
APP Serv
DB Serv
210
DMZ
Router 3
WEB Serv 1
WEB Serv 2
FW 1
205
MAIN OFFICE

FIG. 14

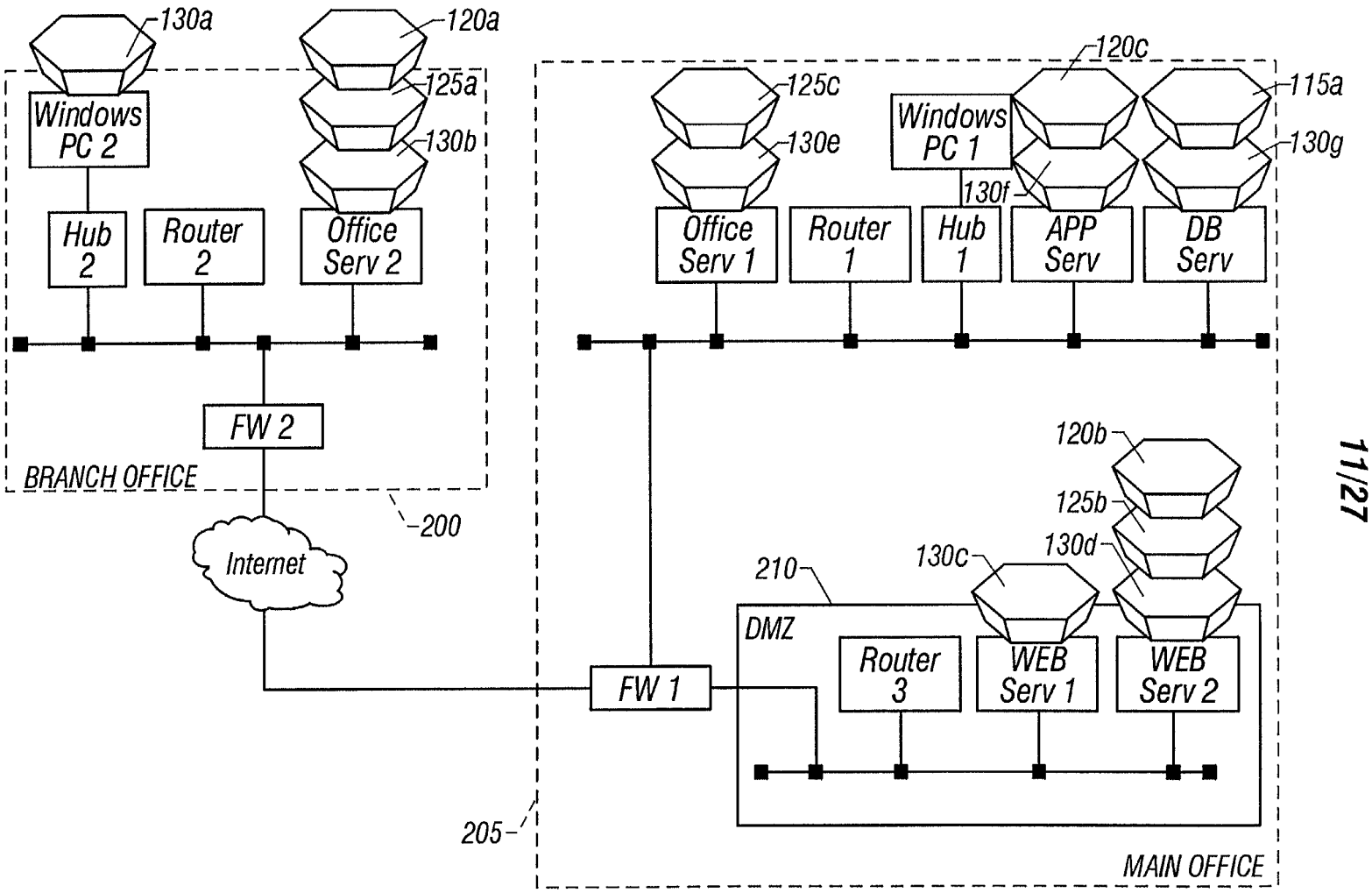

130a
120a
125a
130b
Windows PC 2
Hub 2
Router 2
Office Serv 2
FW 2
BRANCH OFFICE
200
Internet
120c
125c
130e
115a
130g
Windows PC 1
130f
Office Serv 1
Router 1
Hub 1
APP Serv
DB Serv
120b
125b
130d
130c
210
DMZ
Router 3
WEB Serv 1
WEB Serv 2
FW 1
205
MAIN OFFICE

FIG. 15

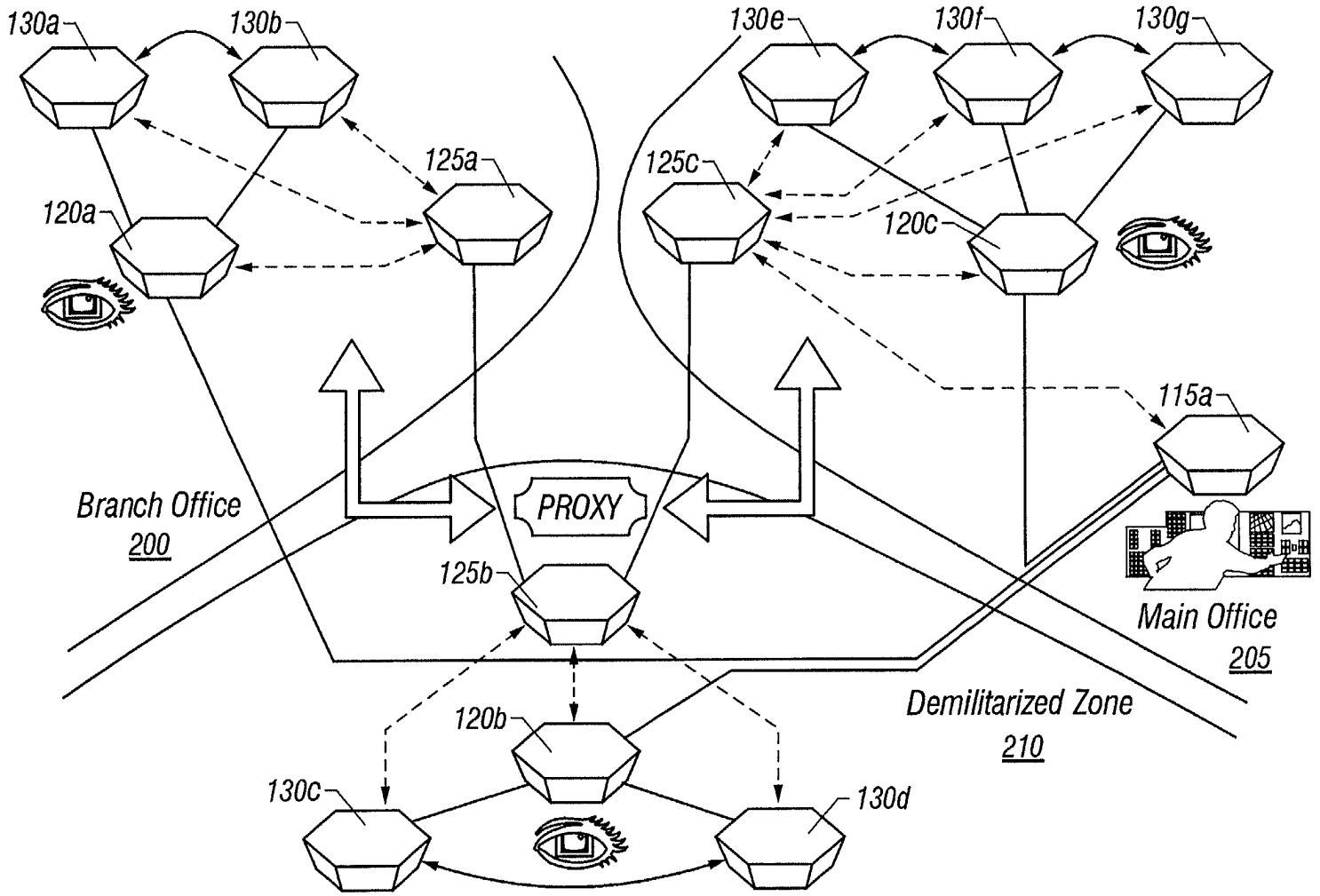
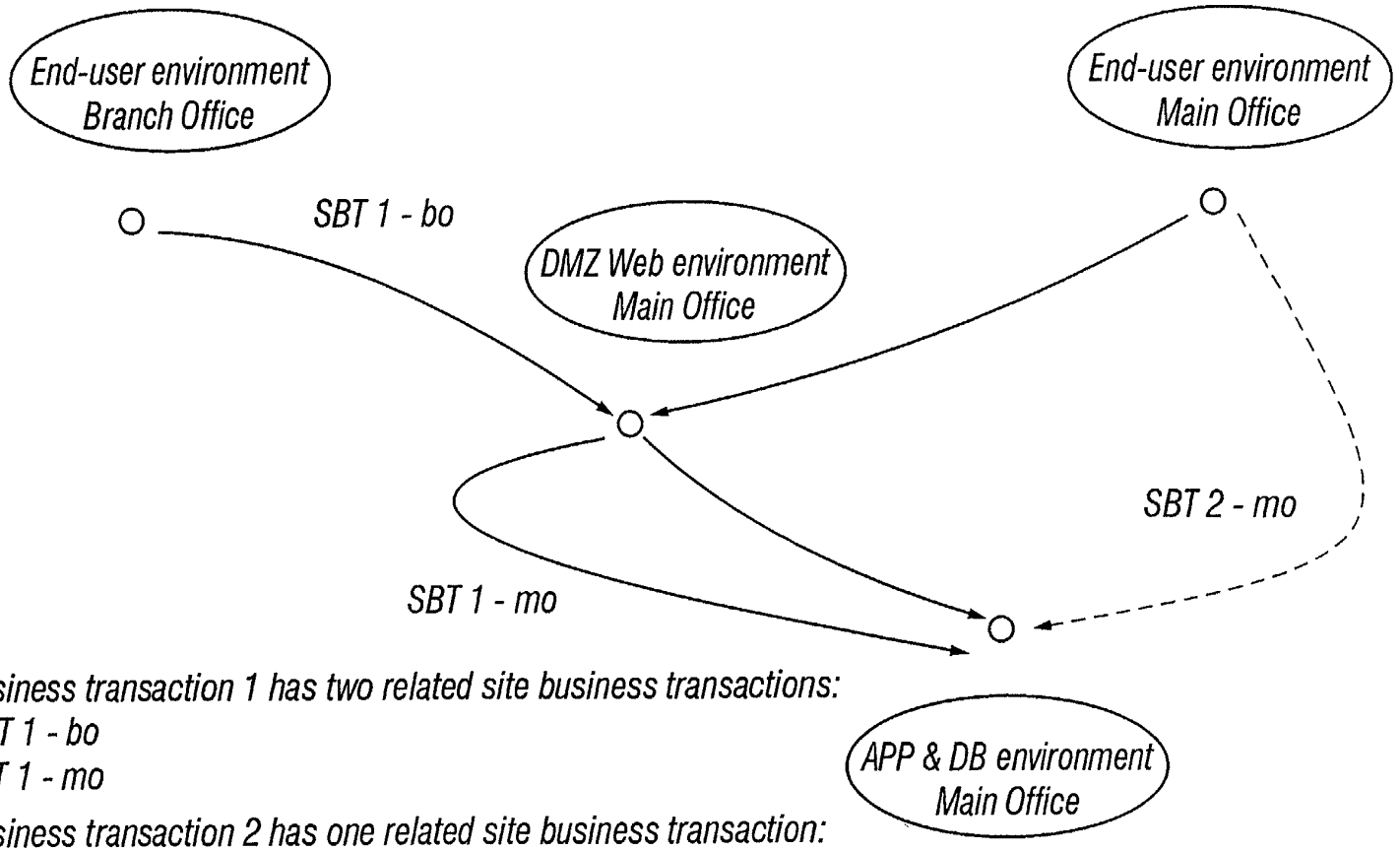

130a
130b
130e
130f
130g
125a
125c
120a
120c
115a
PROXY
Branch Office
200
125b
Main Office
205
Demilitarized Zone
210
120b
130c
130d

FIG. 16



Business transaction 1 has two related site business transactions:
SBT 1 - bo
SBT 1 - mo
Business transaction 2 has one related site business transaction:
SBT 2- mo

FIG. 17

3061E0' E0200660

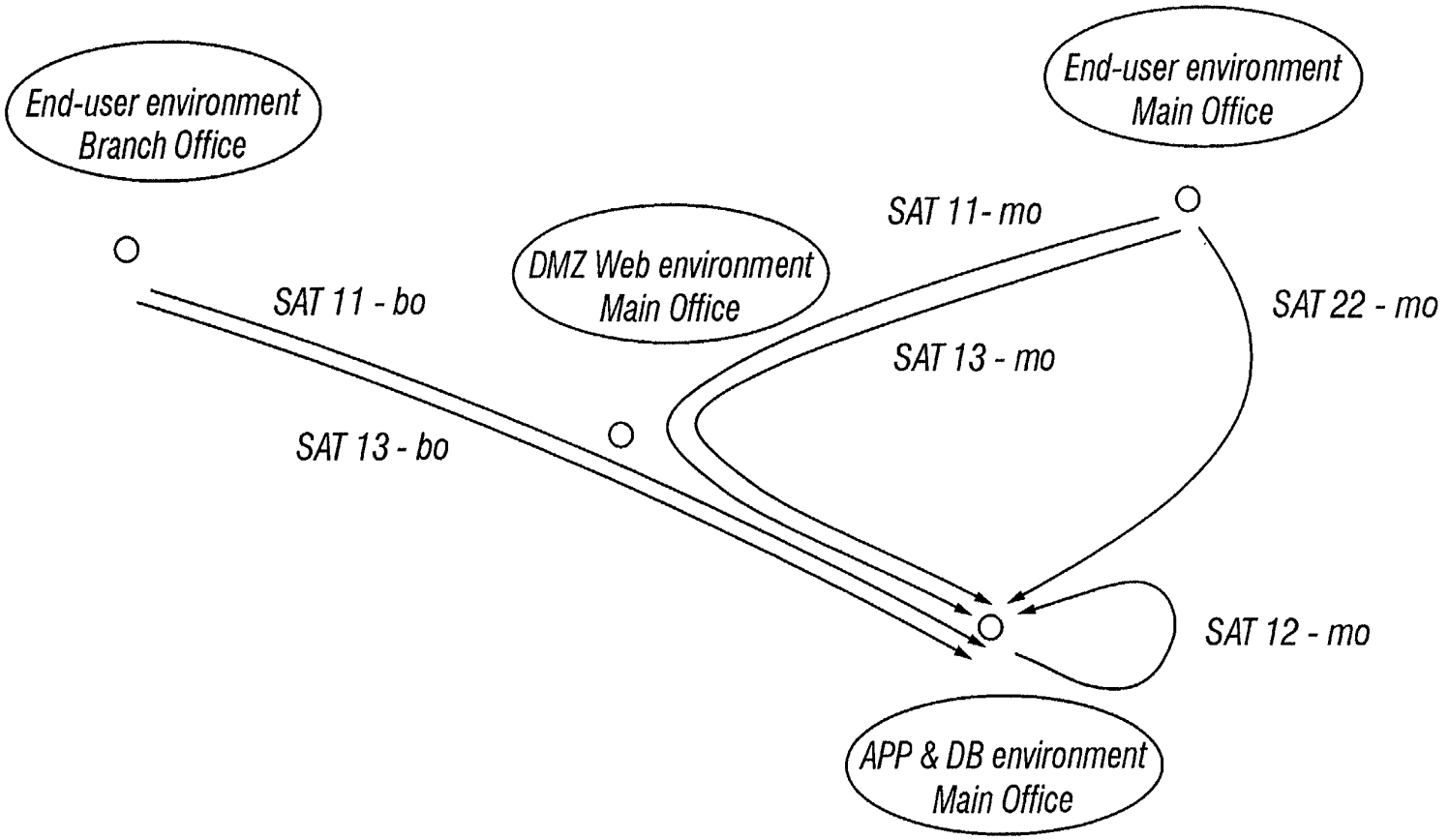


FIG. 18

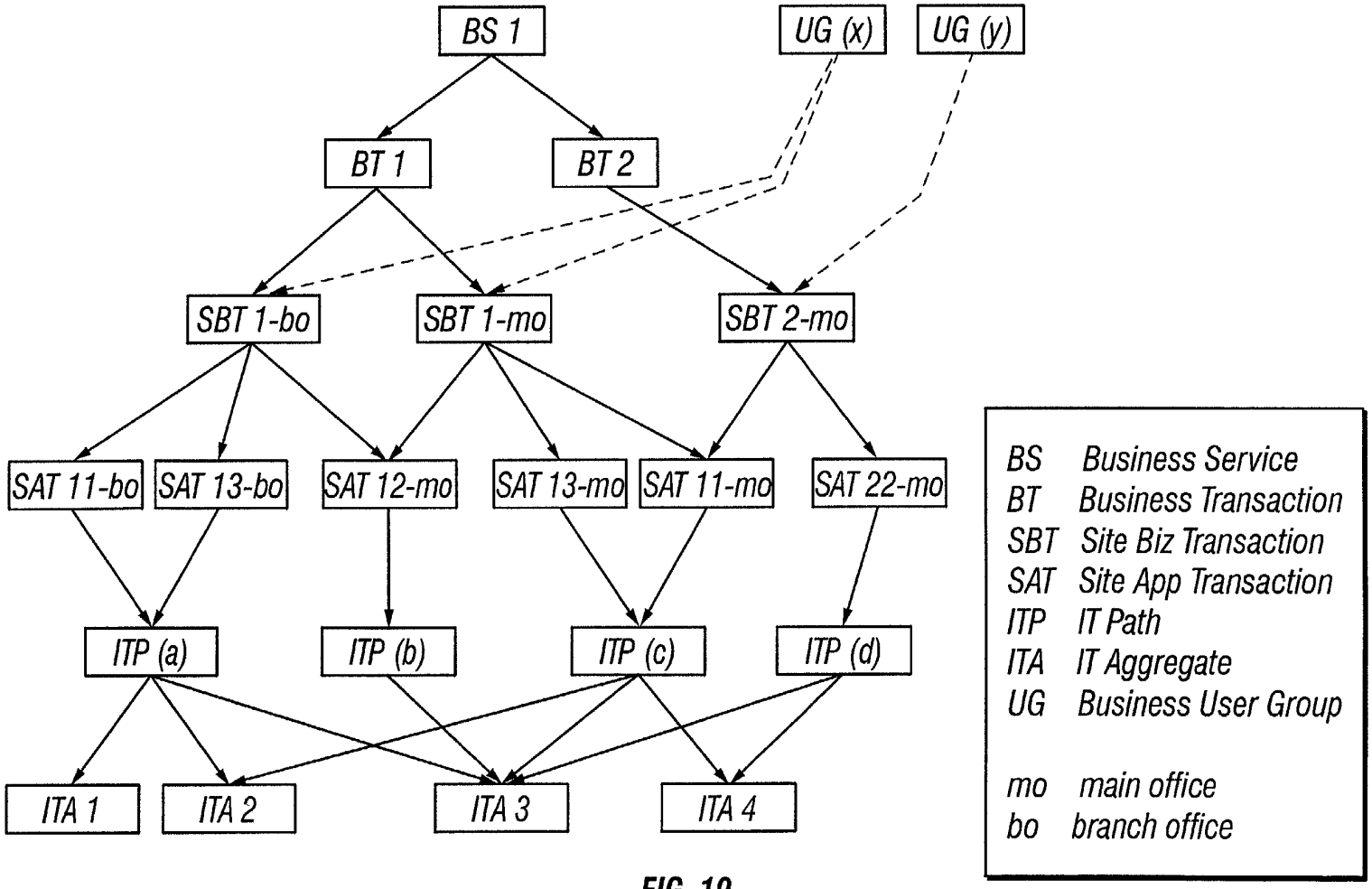

BS 1
UG (x)
UG (y)
BT 1
BT 2
SBT 1-bo
SBT 1-mo
SBT 2-mo
SAT 11-bo
SAT 13-bo
SAT 12-mo
SAT 13-mo
SAT 11-mo
SAT 22-mo
ITP (a)
ITP (b)
ITP (c)
ITP (d)
ITA 1
ITA 2
ITA 3
ITA 4
BS Business Service
BT Business Transaction
SBT Site Biz Transaction
SAT Site App Transaction
ITP IT Path
ITA IT Aggregate
UG Business User Group
mo main office
bo branch office

FIG. 19

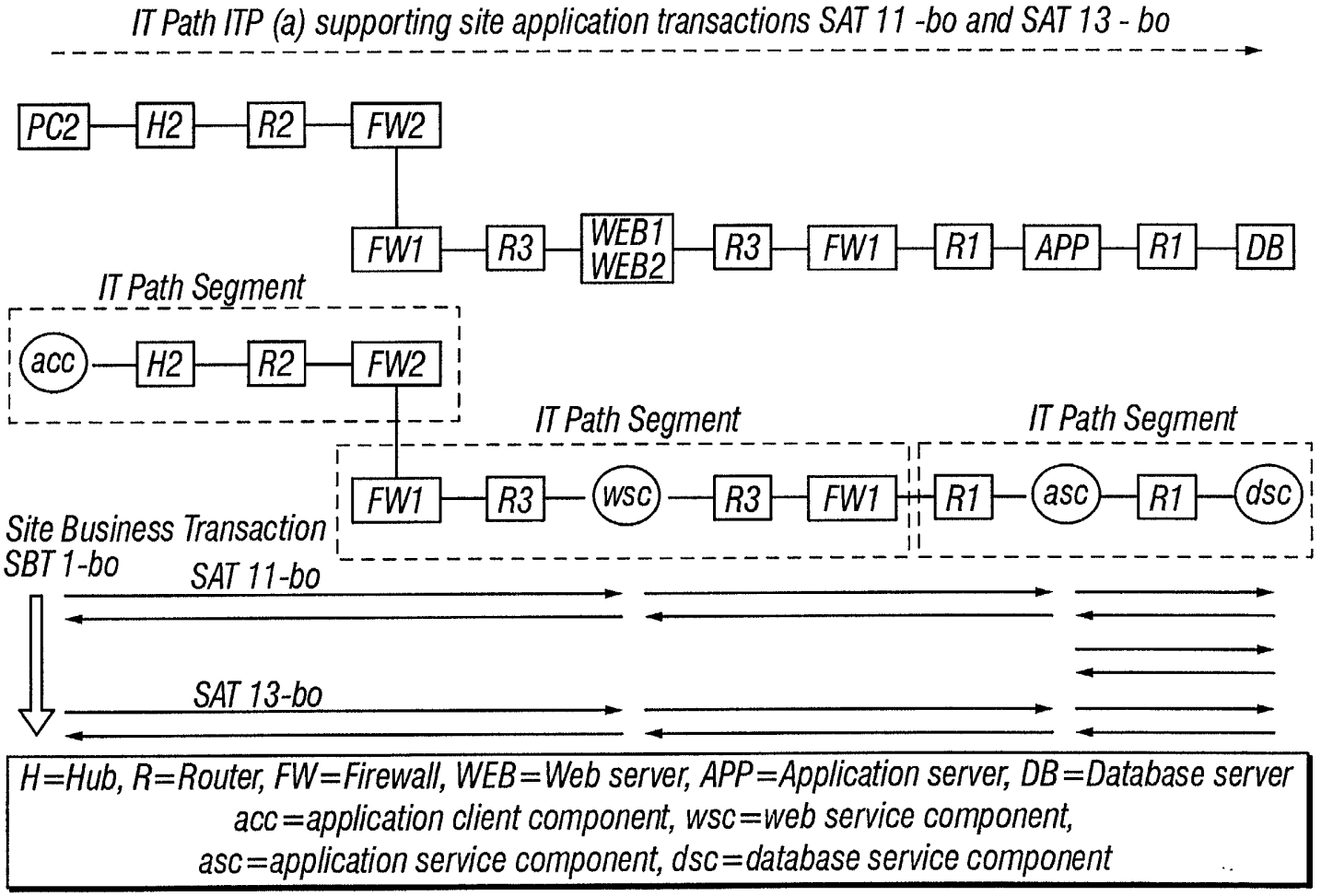

IT Path ITP (a) supporting site application transactions SAT 11 -bo and SAT 13 - bo
PC2
H2
R2
FW2
FW1
R3
WEB1
WEB2
R3
FW1
R1
APP
R1
DB
IT Path Segment
acc
H2
R2
FW2
IT Path Segment
IT Path Segment
FW1
R3
wsc
R3
FW1
R1
asc
R1
dsc
Site Business Transaction
SBT 1-bo
SAT 11-bo
SAT 13-bo
H=Hub, R=Router, FW=Firewall, WEB=Web server, APP=Application server, DB=Database server
acc=application client component, wsc=web service component,
asc=application service component, dsc=database service component

FIG. 20

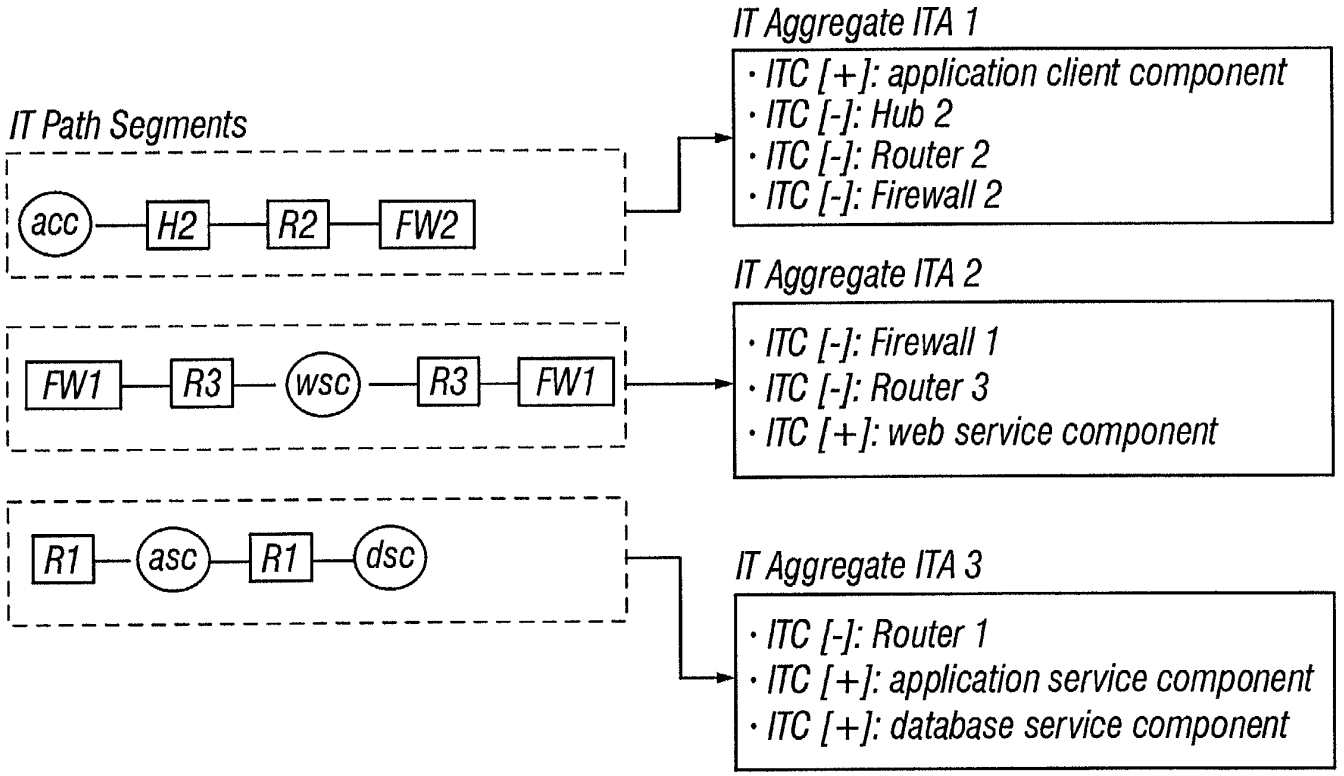

IT Path Segments
acc
H2
R2
FW2
FW1
R3
wsc
R3
FW1
R1
asc
R1
dsc
IT Aggregate ITA 1
· ITC [+]: application client component
· ITC [-]: Hub 2
· ITC [-]: Router 2
· ITC [-]: Firewall 2
IT Aggregate ITA 2
· ITC [-]: Firewall 1
· ITC [-]: Router 3
· ITC [+]: web service component
IT Aggregate ITA 3
· ITC [-]: Router 1
· ITC [+]: application service component
· ITC [+]: database service component

FIG. 21

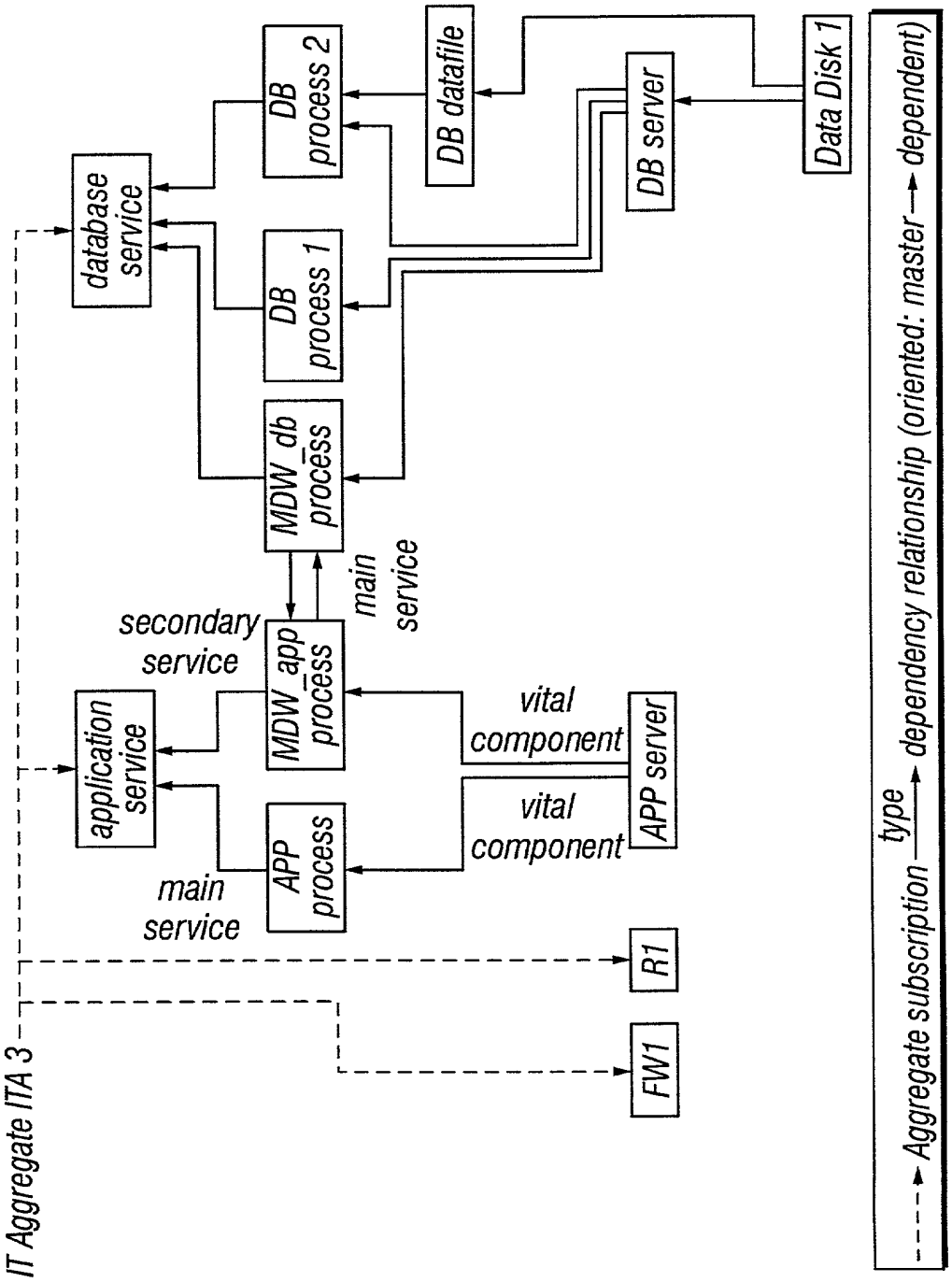

IT Aggregate ITA 3
database service
application service
DB process 2
DB process 1
MDW_db process
MDW_app process
APP process
DB datafile
DB server
Data Disk 1
APP server
R1
FW1
secondary service
main service
main service
vital component
vital component
Aggregate subscription
type
dependency relationship (oriented: master → dependent)

FIG. 22

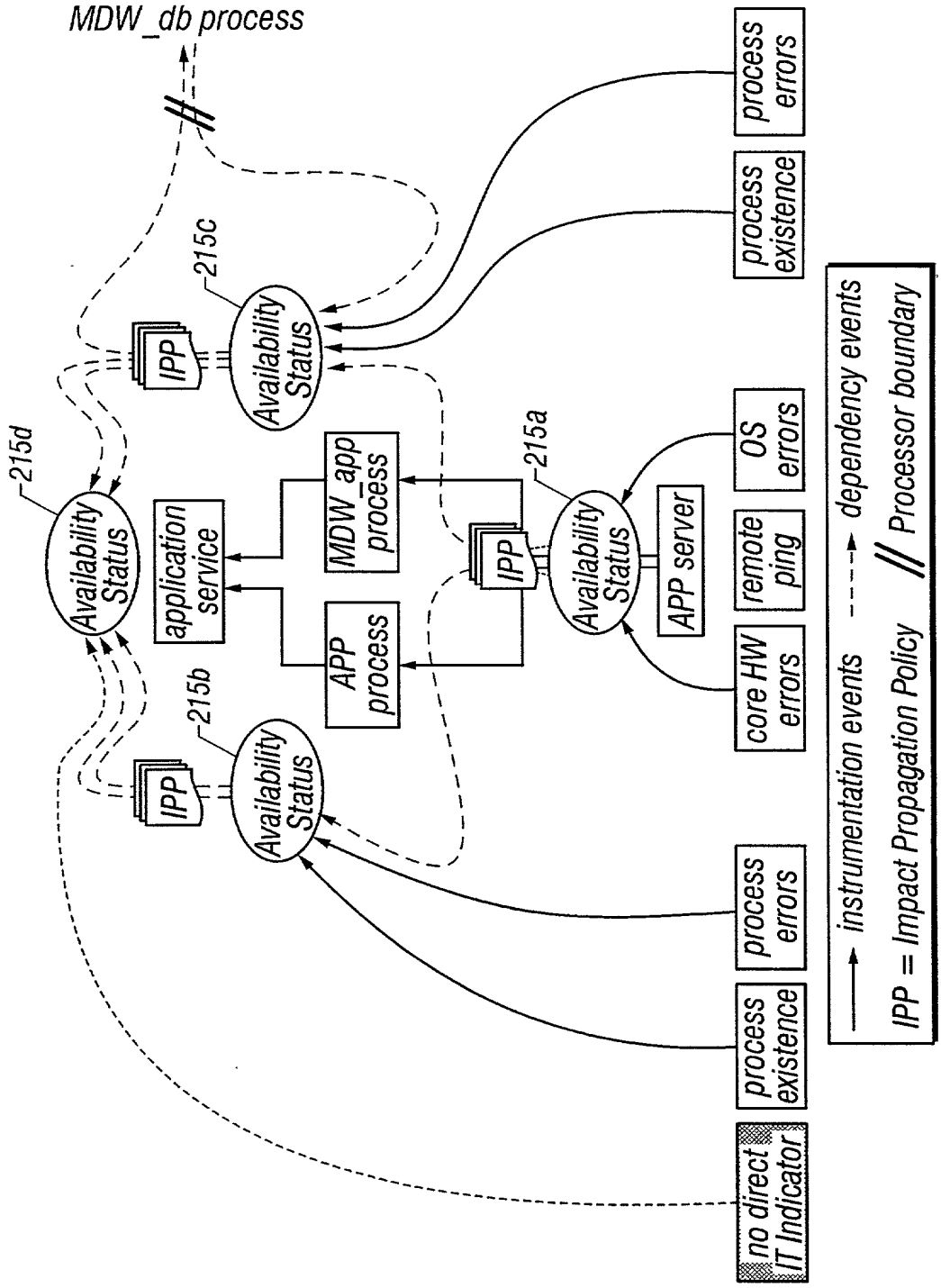

MDW_db process
215c
Availability Status
IPP
215d
Availability Status
application service
MDW_app process
APP process
215a
IPP
Availability Status
APP server
OS errors
remote ping
core HW errors
215b
IPP
Availability Status
process errors
process existence
process errors
process existence
no direct IT Indicator
instrumentation events
dependency events
IPP = Impact Propagation Policy
Processor boundary

FIG. 23

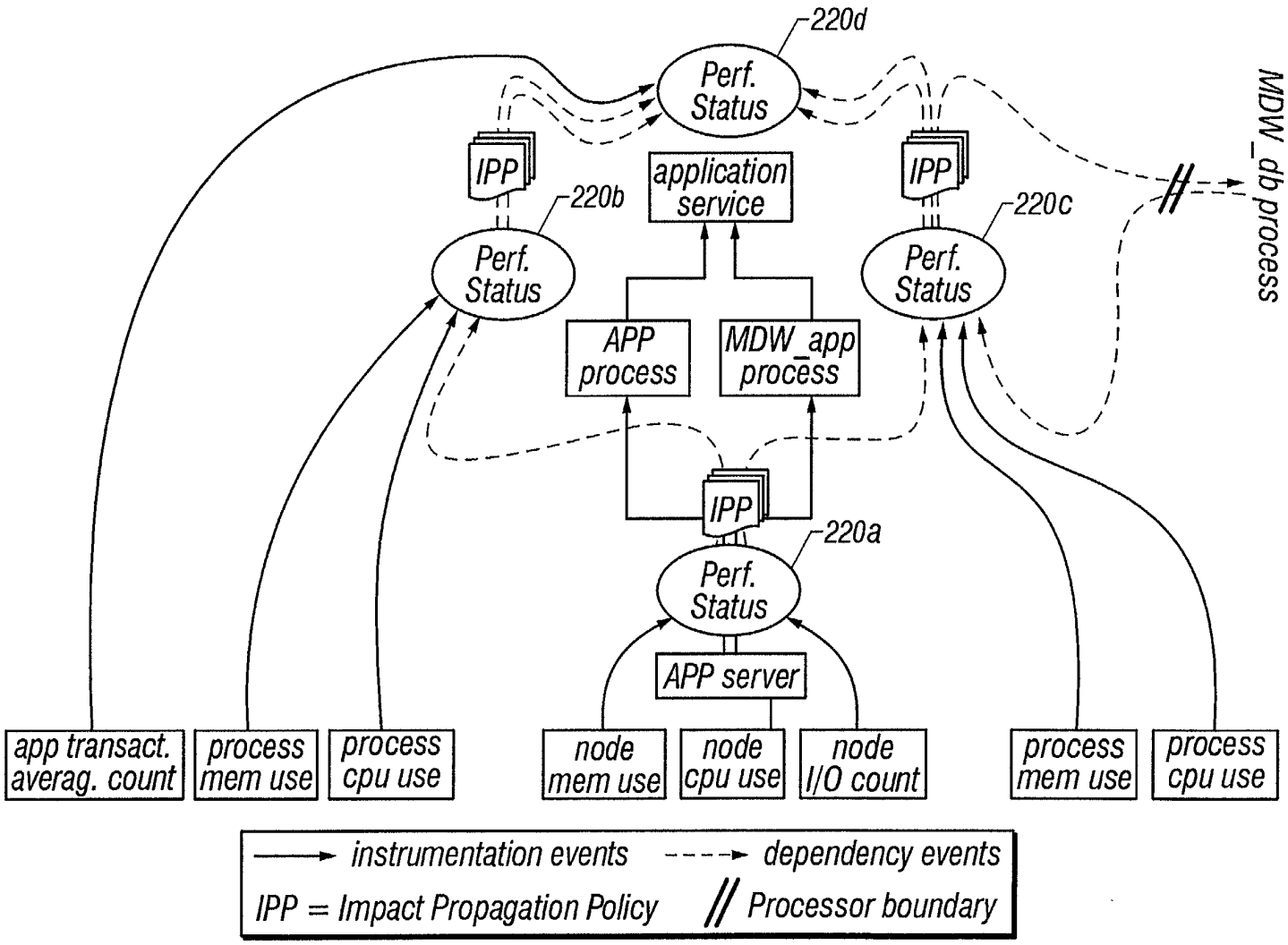

220d
Perf. Status
IPP
application service
220b
220c
Perf. Status
Perf. Status
MDW_db process
APP process
MDW_app process
IPP
220a
Perf. Status
APP server
app transact. averag. count
process mem use
process cpu use
node mem use
node cpu use
node I/O count
process mem use
process cpu use
instrumentation events
dependency events
IPP = Impact Propagation Policy
// Processor boundary

FIG. 24

Impact Propagation Policy 2 for 'Vital component' dependency type

Event Origin : instrumentation of the Master resource

*Severity of a new **bsi** event generated for the Master resource*	*Severity of the resulting **bsd** event generated for each of the Dependent resources*
UNKNOWN	*n.a.*
HARMLESS	*n.a.*
WARNING	*n.a.*
MINOR	*n.a.*
CRITICAL	*MINOR*
FATAL	*FATAL*

Event Origin : upstream dependency of the Master resource

*Severity of a new **bsd** event generated for the Master resource*	*Severity of the resulting **bsd** event generated for each of the Dependent resources*
UNKNOWN	*n.a.*
HARMLESS	*n.a.*
WARNING	*n.a.*
MINOR	*MINOR*
CRITICAL	*MINOR*
FATAL	*FATAL*

Impact Propagation Policy 6 for 'Secondary service' dependency type

Event Origin : instrumentation of the Master resource

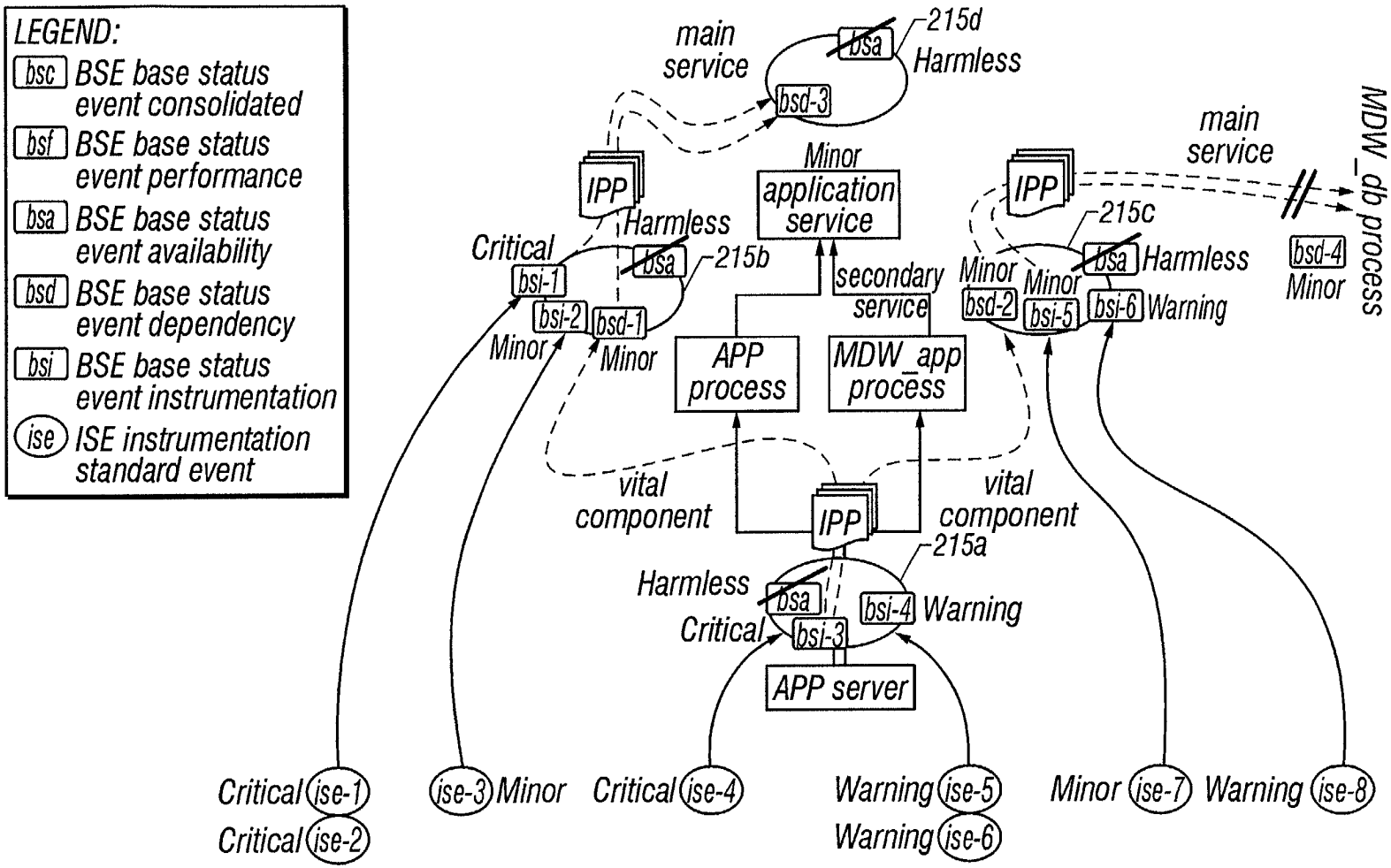
*Severity of a new **bsi** event generated for the Master resource*	*Severity of the resulting **bsd** event generated for each of the Dependent resources*
UNKNOWN	*n.a.*
HARMLESS	*n.a.*
WARNING	*n.a.*
MINOR	*n.a.*
CRITICAL	*n.a.*
FATAL	*WARNING*

CONFIGURABLE

Event Origin : upstream dependency of the Master resource

*Severity of a new **bsd** event generated for the Master resource*	*Severity of the resulting **bsd** event generated for each of the Dependent resources*
UNKNOWN	*n.a.*
HARMLESS	*n.a.*
WARNING	*n.a.*
MINOR	*n.a.*
CRITICAL	*WARNING*
FATAL	*WARNING*

FIG. 25



SHOWING AVAILABILITY DISCIPLINE CONTEXT

FIG. 26

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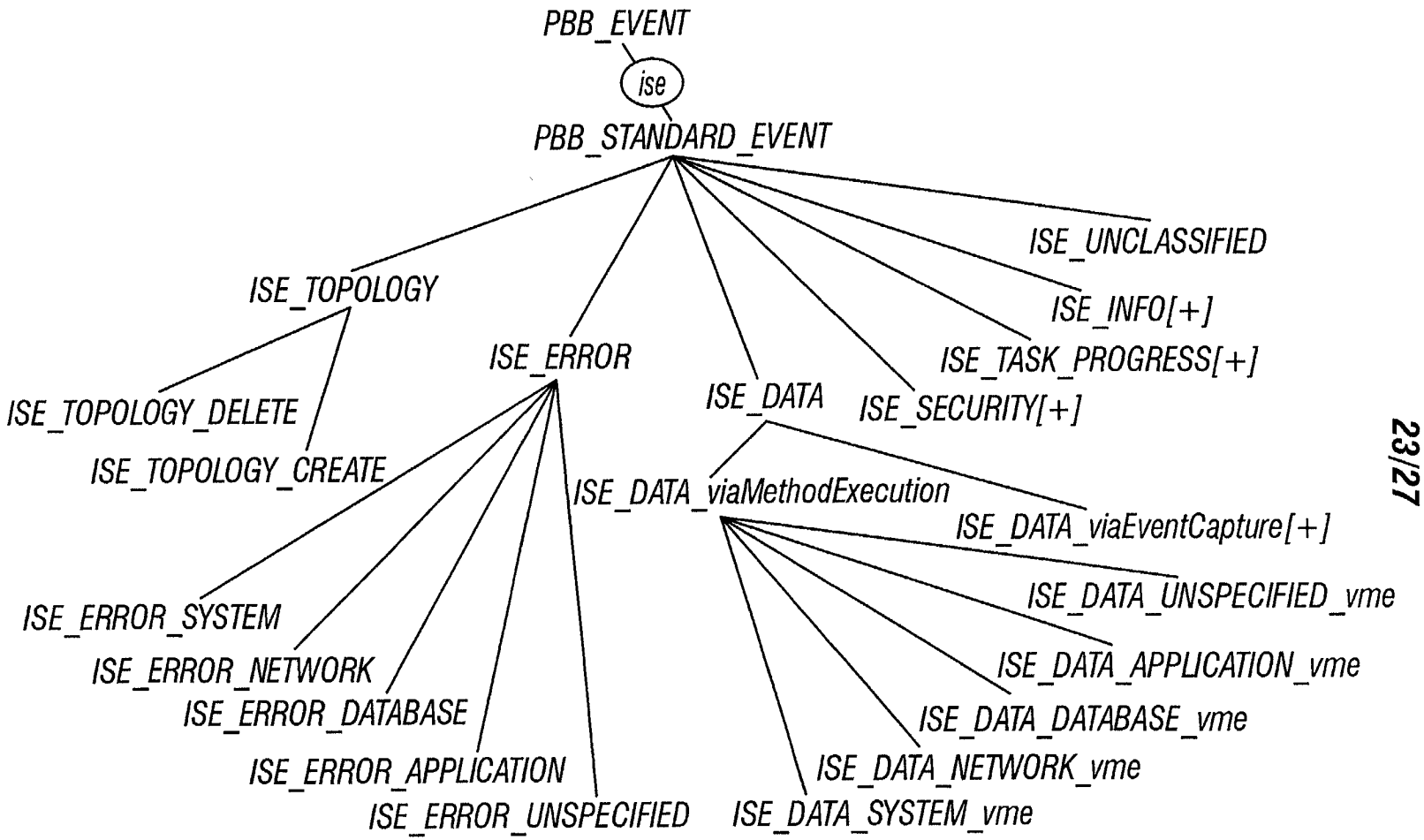
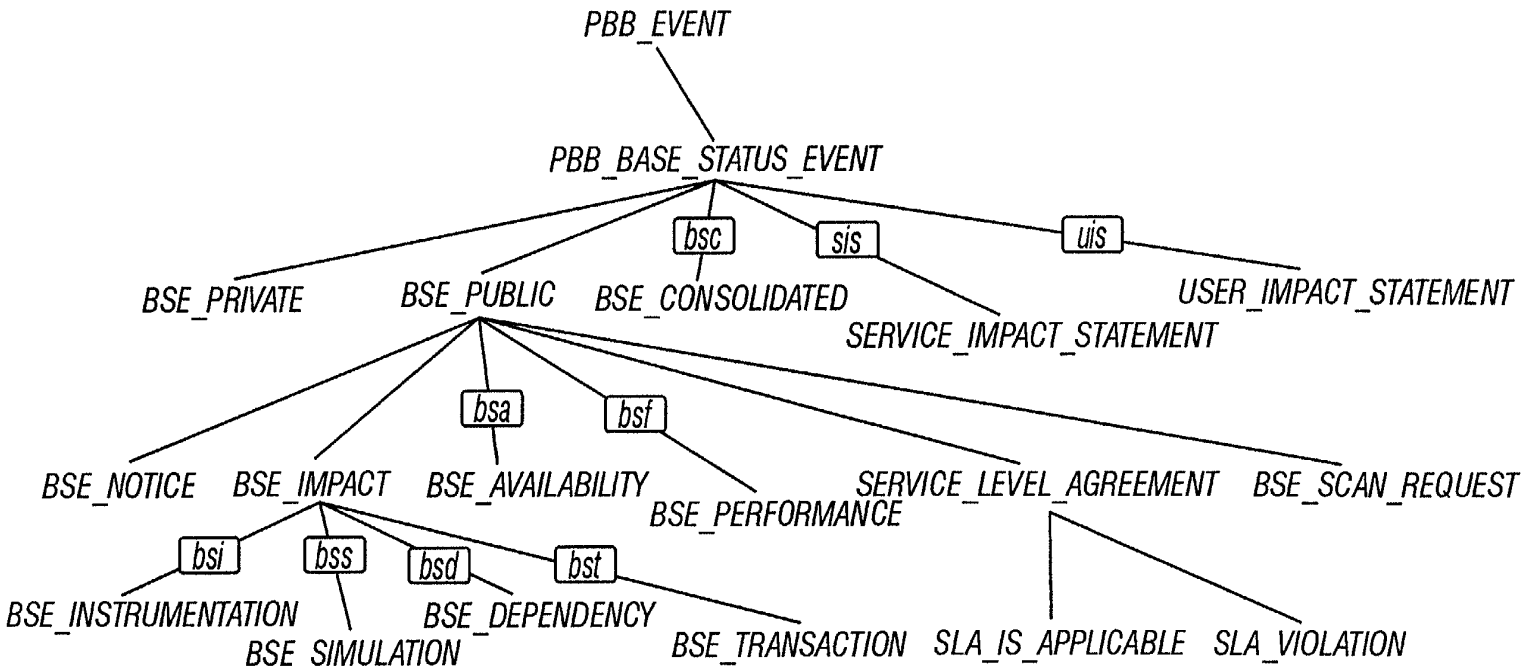


FIG. 27



Authorized Severity Values for the BSE events:

Class/Severity	UNKN	HARM	WARN	MINOR	CRIT	FATAL
BSE_INSTRUMENTATION (bsi)			X	X	X	X
BSE_DEPENDENCY (bsd)			X	X	X	X
BSE_TRANSACTION (bst)	X		X	X	X	X
BSE_AVAILABILITY (bsa)		X				
BSE_PERFORMANCE (bsf)		X				
BSE_CONSOLIDATED (bsc)						

FIG. 28

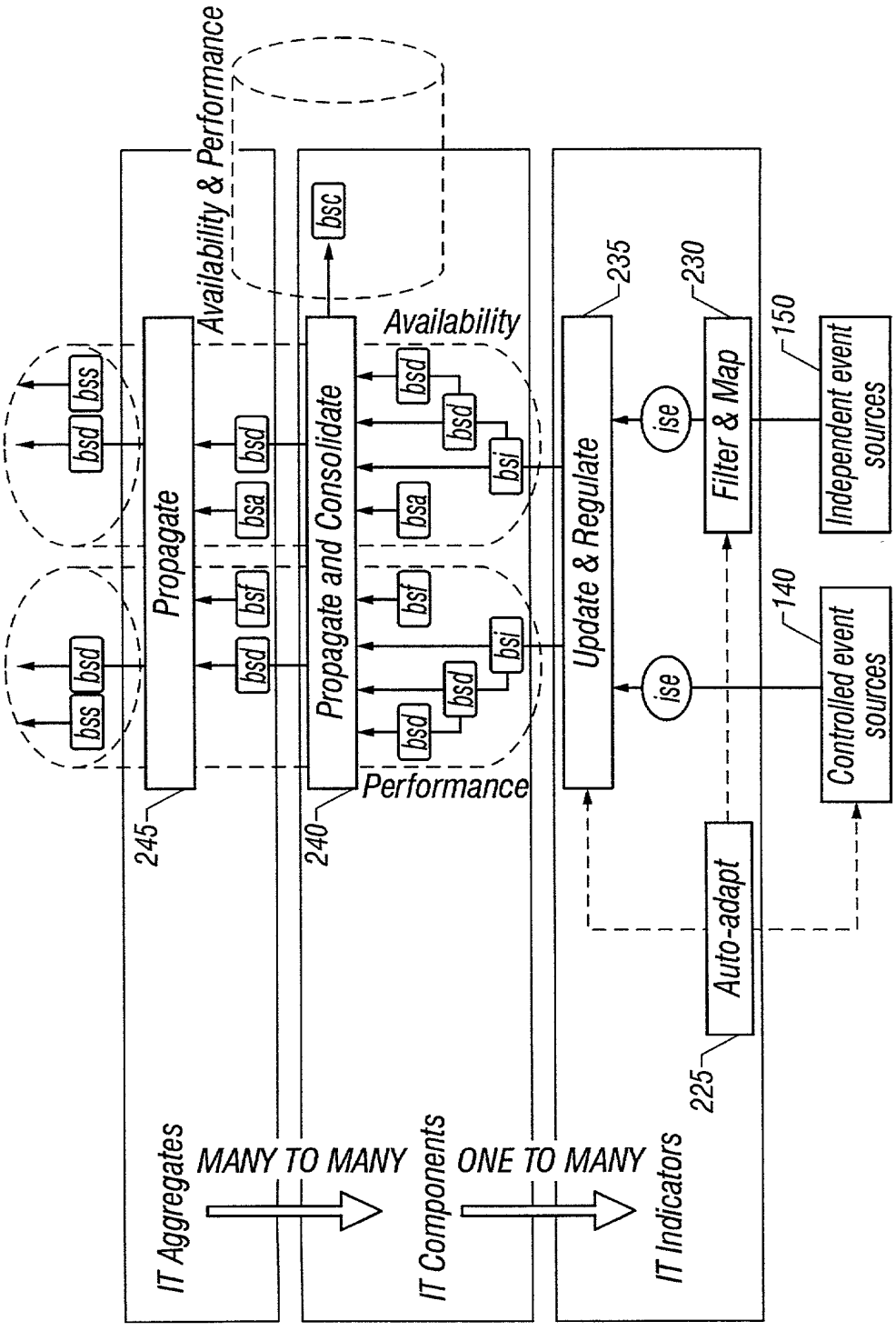

Availability & Performance
Availability
Performance
Propagate
Propagate and Consolidate
Update & Regulate
Filter & Map
Independent event sources
Controlled event sources
Auto-adapt
ise
ise
bss
bsd
bsf
bsa
bsi
bsc
245
240
235
230
150
140
225
IT Aggregates
MANY TO MANY
IT Components
ONE TO MANY
IT Indicators

FIG. 29

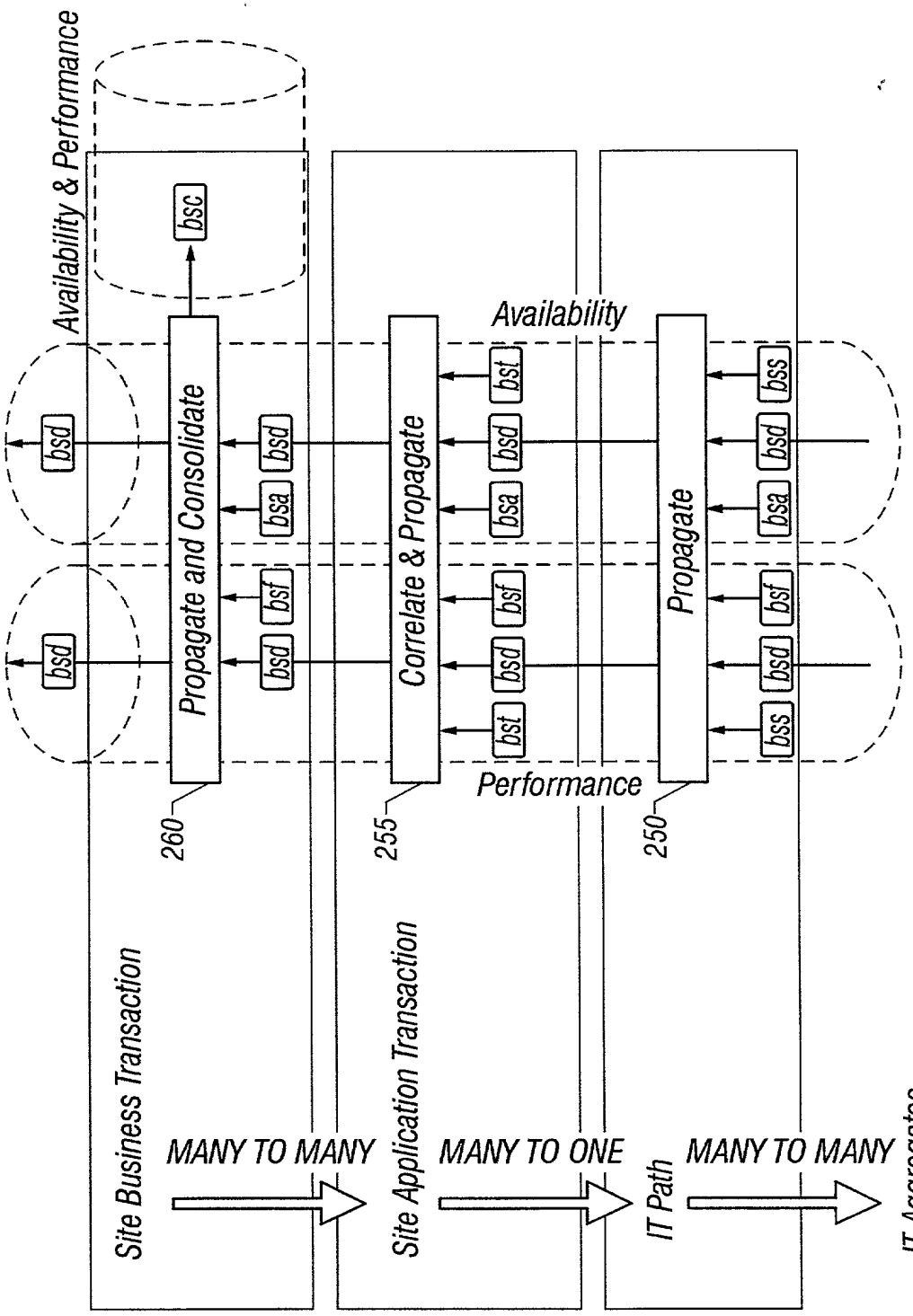

Availability & Performance
Availability
Performance
Propagate and Consolidate
Correlate & Propagate
Propagate
260
255
250
bsc
bsd
bsa
bsf
bst
bss
Site Business Transaction
Site Application Transaction
IT Path
IT Aggregates
MANY TO MANY
MANY TO ONE
MANY TO MANY

FIG. 30

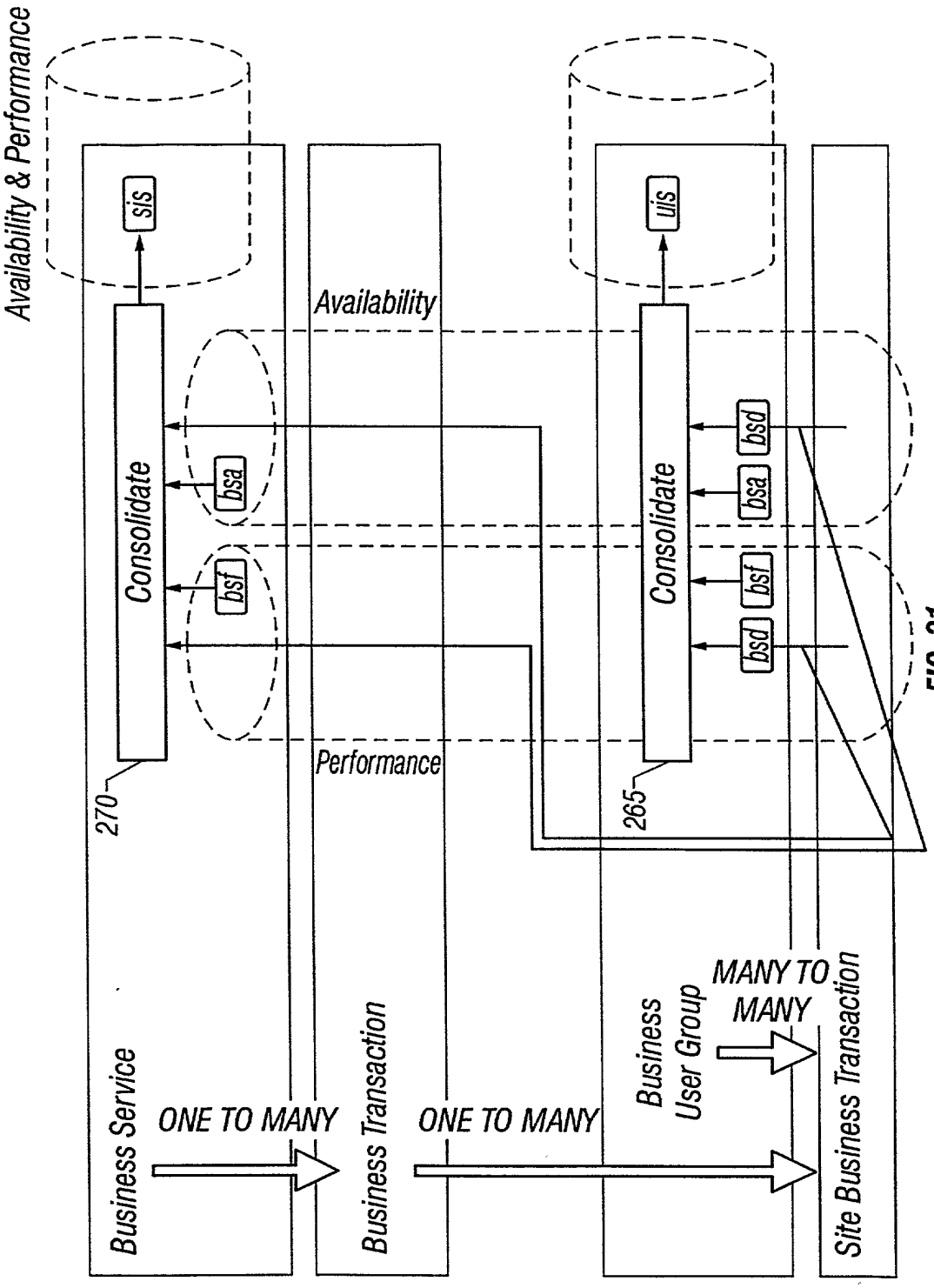

Availability & Performance
sis
uis
Availability
Consolidate
Consolidate
bsa
bsf
bsd
bsa
bsf
bsd
Performance
270
265
Business Service
ONE TO MANY
Business Transaction
ONE TO MANY
Business User Group
MANY TO MANY
Site Business Transaction

FIG. 31